

REMARKS

With the cancellation herein without prejudice of claims 12 and 13, claims 11, and 14 to 19 are now pending and being considered. It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Claims 11 to 13, and 17 to 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of that which the Examiner characterizes as Applicant's Admitted Prior Art ("AAPA") of the instant application, and U.S. Patent Application Publication No. 2005/0022166 (the "Wolff" reference). Without addressing the Examiner's characterization of the AAPA as admitted prior art, it is respectfully submitted that the combination of the AAPA and the "Wolff" reference does not render unpatentable the present claims for at least the following reasons.

As an initial matter, claims 12 and 13 have been canceled herein without prejudice, thereby rendering moot the present rejection with respect to claims 12 and 13.

As for the remaining claims, in order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), the prior art must teach or suggest each element of the claim. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990), *cert. denied*, 111 S. Ct. 296 (1990); *In re Bond*, 910 F.2d 831, 834 (Fed. Cir. 1990). In addition, as clearly indicated by the Supreme Court, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). Further, the Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. M.P.E.P. §2143.

Claim 11 relates to a simulation system for computer-implemented simulation and verification of a control system under development, the control system comprising a target hardware and application software running on the target hardware, the simulation system comprising *hardware implementing a generic model animation interface* passing data from the target hardware to a modeling tool for animating a model of the control system and an in-model calibration interface passing data from the modeling tool to the application software, the model animation interface and the in-model calibration interface using measurement and calibration technologies in a host-target architecture, to communicate with *a standard measurement and calibration interface on the target hardware* forming a link between the application software on the target hardware and the host, and the system further

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comprising a target server adapted to connect the modeling tool with the target hardware, the target server including at least one protocol driver of a communication protocol adapted for communication with the target, the target server configured to translate between the generic model animation interface and the standard measurement and calibration interface. Support for these amendments may be found in the Substitute Specification, e.g., at page 24, lines 1 to 16.

The Office Action at page 3 admits that “the AAPA does not teach a generic interface … and a standard measurement and calibration interface.” Indeed, the AAPA refers to a host having an measurement and calibration tool using dedicated software drivers. (AAPA, p. 6, lines 24 to 29). Further, the AAPA at page 5, lines 24 and 31 refers to “dedicated experiment hardware” and “dedicated M & C communication interfaces.” Similarly, the AAPA at page 8, line 8 refers to “dedicated rapid prototyping hardware.” Moreover, the AAPA at page 6, line 29 states that “the target hardware runs dedicated protocol handlers.” In addition, the AAPA refers to “dedicated experiment hardware for rapid prototyping,” “dedicated M & C communication interfaces,” and hardware protocol specific data transmissions between a host and a target, where the host and target must each use protocol handlers dependent on the target hardware. (AAPA, p. 5, lines 24 and 31; and p. 8, lines 4 to 11). Therefore, nowhere does the AAPA disclose a target server, as provided for in the context of claim 11, as presented. Further, since the Office Action admits that the AAPA does not teach a generic model animation interface and a standard measurement and calibration interface, the AAPA also does not disclose a target server configured to translate between the generic model animation interface and the standard measurement and calibration interface. Thus, the AAPA does not disclose or suggest the feature of *a target server adapted to connect the modeling tool with the target hardware, the target server including at least one protocol driver of a communication protocol adapted for communication with the target, the target server configured to translate between the generic model animation interface and the standard measurement and calibration interface*, as provided for in the context of claim 11, as presented.

Further, the “Wolff” reference does not correct this critical deficiency of the AAPA. In this regard, the “Wolff” reference merely refers to a standard control unit 100 and an experimental control unit 101 connected by a communication link 103. Each of the standard control unit 100 and the experimental control unit 101 includes data and software function blocks. (Wolff, ¶¶ 19 to 22; and Figure 1). However, nowhere does the “Wolff”

reference disclose a target server, as provided for in the context of claim 11, as presented. Specifically, the interfaces between the standard control unit 100 and the experimental control unit 101 are merely connected by a communication link 103. Nowhere does the “Wolff” reference disclose a target server configured to translate between the interfaces of the control units. Thus, the “Wolff” reference does not disclose, or suggest, the feature of *a target server adapted to connect the modeling tool with the target hardware, the target server including at least one protocol driver of a communication protocol adapted for communication with the target, the target server configured to translate between the generic model animation interface and the standard measurement and calibration interface*, as provided for in the context of claim 11, as presented.

For all of the foregoing reasons, the combination of the AAPA and the “Wolff” reference does not disclose or suggest each feature of claim 11, as presented, so that the combination of the AAPA and the “Wolff” reference does not render unpatentable claim 11.

Claims 17 to 19 include subject matter analogous to that of claim 11, as presented, so that the combination of the AAPA and the “Wolff” reference does not render unpatentable claims 17 to 19 for at least essentially the same reasons as claim 11.

Withdrawal of this obviousness rejection is therefore respectfully requested.

Claims 14 to 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the AAPA, the “Wolff” reference, and the article “Design of Dynamically Reconfigurable Real-Time Software Using Port-Based Objects,” IEEE Transactions on Software Engineering, Vol. 23, No. 12, December 1997 (the “Stewart” reference). It is respectfully submitted that the combination of the AAPA, the “Wolff” reference, and the “Stewart” reference does not render unpatentable these claims for at least the following reasons.

Claims 14 to 16 ultimately depend from claim 11 and are therefore allowable over the combination of the AAPA, the “Wolff” reference, and the “Stewart” reference for at least the same reasons as claim 11 since the “Stewart” reference does not cure, and is not asserted to cure, the critical deficiencies noted above with respect to the combination of the AAPA and the “Wolff” reference as applied to claim 11, as presented.

Withdrawal of this obviousness rejection is therefore respectfully requested.

Accordingly, all of the presently pending claims 11, and 14 to 19 are allowable.

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Conclusion

In view of the foregoing, it is respectfully submitted that all of the presently pending claims 11, and 14 to 19 are allowable. It is therefore respectfully requested that the objections and rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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